annular contact patterns so as to surround the shaft **5**. The annular contact patterns of the printed patterns **17***a* and **17***b* are identical to those of the printed patterns **16***a* and **16***b*. These annular contact patterns are contacted with one another so as to establish an electrical connection between them. In other words, the electric circuits **9** and **10** are connected via the annular contact patterns.

When the sub-body **2** is opened and closed, both of the annular printed patterns are continuously in slide contact with one another. Substantially no stress such as tension or compression acts on the printed patterns **16***a*, **16***b*, **17***a* and **17***b*, which prevents breaking and poor electrical connection. Further, when the sub-body **2** is assembled to the main body **1**, the printed patterns **16***a* and **16***b* are connected to the printed patterns **17***a* and **17***b* via the annular contact patterns. Thus, the opening and closing mechanism has a simple structure, and can be assembled in a simplified manner. The reduction of components and simplified assembly work make the opening and closing mechanism less expensive.

Embodiment 8

An eighth embodiment features a pair of hinge units whose structure differs from those of the foregoing embodiments. As shown in FIGS. **11** and **12**, a pair of hinge units **6***a* and **6***b* are positioned at opposite sides of the sub-body **2**.

The right hinge unit **6***a* includes a cam **4***a* and an angle regulating leaf spring **3***a*. The cam **4***a* has a profile for determining opening and closing angles of the sub-body **2**, and is held by the leaf spring **3***a* at portions for setting the opening and closing angles. Referring to FIG. **12**, the cam **4***a* has a groove **19***a* around which a distribution cable **7** is wound, and a through-hole **18***a*. The through-hole **18***a* is formed in the cam **4***a* along the center axis thereof and used for passing the distribution cable **7** therethrough. The distribution cable **7** is connected at its one end to the electric circuit **9**. At the other end, the distribution cable **7** enters into the through-hole **18***a* from an inner end of the cam **4***a*, comes out from the through-hole **18***a*, is wound around the groove **19***a* on the cam **4***a*, again enters into the through-hole **18***a*, passes through the through-hole **18***a* toward an outer end thereof, comes out of through-hole **18***a* via the outer end, and is connected to the electric circuit **10** of the sub-body **2**. In this embodiment, the cam **4***a* also functions as the shaft **5***a* used in the first to seventh embodiments.

The left hinge unit **6***b* includes a cam **4***b* and an angle regulating leaf spring **3***b*, and is structured similarly to the right hinge unit **6***a*. The cam **4***b* has a groove **19***b* around which a distribution cable **8** is wound, and a through-hole **18***b*. The through-hole **18***b* is formed in the cam **4***b* along the center axis thereof and used for passing the distribution cable **8** therethrough. The distribution cable **8** is connected between the electric circuits **9** and **10** via the hinge unit **6***b* in a similar manner to the distribution cable **7** mentioned above.

In the eighth embodiment, the distribution cables **7** and **8** pass through the through-hole **18***a* and **18***b* in the cams **4***a* and **4***b*, and are wound in the grooves **19***a* and **19***b* on the cams **4***a* and **4***b*. Thus, the distribution cables **7** and **8** are stretched when the sub-body **2** is opened. Conversely, the distribution cables **7** and **8** are compressed when the sub-body **2** is closed. In other words, the distribution cables **7** and **8** are not twisted or untwisted when the sub-body **2** is opened or closed. This prevents the distribution cables **7** and **8** from breaking and poor electrical connection. The more loosely and the more times the distribution cables **7** and **8** are wound in the grooves **19***a* and **19***b* on the cams **4***a* and **4***b*, the less stress will be applied to the distribution cables **7** and **8**, which is effective in protecting the cables **7** and **8** against breaking and poor electrical connection.

Further, a space for mounting electronic components or the like is available between the left and right hinge units **6***a* and **6***b* since the hinge units **6***a* and **6***b* are positioned near the left and right side edges of the sub-body **2**.

The opening and closing mechanisms according to the invention are effective in preventing poor electrical connections between the bodies constituting the portable phone. Further, they can be efficiently assembled at a reduced cost.

What is claimed is:

1. An opening and closing mechanism for an electronic device, comprising:

a main body and a sub-body respectively including electric circuits;

a hinge unit for joining together one end of each of the main body and the sub-body, cam means, including a shaft, for setting opening and closing angles of said sub-body with respect to said main body, and an angle-regulating means for maintaining said cam means at a set angle;

a distribution cable for providing electrical connection between the electric circuit of the main body and the electric circuit of the sub-body, said distribution cable having an intermediate portion wound around said shaft; and

a conductive, stretchable cable connected between said distribution cable and at least one of said electric circuits.

2. The opening and closing mechanism according to claim **1**, wherein the electronic device is a flip type portable telephone.

3. The opening and closing mechanism according to claim **2**, wherein the electric circuit of the main body is a radio circuit of the portable telephone, and the electric circuit of the sub-body is a control circuit of the portable telephone.

4. An opening and closing mechanism for an electronic device as set forth in claim **1**, wherein said conductive, stretchable cable is connected between said distribution cable and the electric circuit of said main body.

5. An opening and closing mechanism for an electronic device as set forth in claim **1**, wherein said conductive, stretchable cable is connected between said distribution cable and the electric circuit of said sub-body.

6. An opening and closing mechanism for an electronic device as set forth in claim **1**, wherein said conductive, stretchable cable is connected between said distribution cable and the electric circuits of said main body and said sub-body.

7. An opening and closing mechanism for an electronic device as set forth in claim **1**, wherein said conductive, stretchable cable is helical.

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